WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

WALTER & SON WASTE HAULING

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
N3368 US Highway 14, Darien, WI
to
Groundwaters of the State via landspreading on Approved Sites
In Walworth County

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Nate Willis, Wastewater Engineer
Bureau of Water Quality

_____
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE – February 1, 2017 **EXPIRATION DATE - December 31, 2021**
MODIFICATION EFFECTIVE DATE – November 1, 2020

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1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
701	Inflow to Storage of Liquid Industrial Wastewater from Pet Factory
702	Inflow to Storage of Liquid Industrial Wastewater from Dean Foods - Harvard
703	Inflow to Storage of Liquid Industrial Wastewater from Land Management Inc.'s Leachate Control Structure (Storage Pad - See Outfall 010 of WPDES WI-0057720)
704	Inflow to Storage of Liquid Industrial Sludge from Kemp Foods
705	Inflow to Storage of Liquid Industrial Wastewater from Axium Foods
706	Inflow to Storage of Liquid Industrial Wastewater from Mars Chocolate
707	Inflow to Storage of Liquid Industrial Wastewater from Z Trim
708	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 620
709	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 622
710	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 632
711	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 633
712	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 650
713	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 665
714	Inflow to Storage of Liquid Industrial Wastewater from Grande Cheese (formally PGP International)
715	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 625
716	Inflow to Storage of Liquid Industrial Sludges from Aveca/ Little Sioux.
717	Inflow to Slurrystore #1 of Liquid Municipal biosolids from Evansville WWTP
718	Inflow to Storage of Industrial Wastewater from Bytec Resource Management's Confidential Client 682
719	Inflow to Storage of Industrial Wastewater from Bytec Resource Management's Confidential Client 648
720	Inflow to Storage of Industrial Wastewater from Bytec Resource Management's Confidential Cilent 639
721	Inflow to Storage of Industrial Wastewater from Bytec Resource Management's Confidential Client 647
722	Inflow to Storage of Industrial Wastewater from Bytec Resource Management's Confidential Client 655
723	Inflow to Storage of Liquid Industrial Wastewater from Bytec Resource Management's Confidential Client 649
724	Inflow to Storage of Industiral Wastewater from Bytec Resource Management's Confidential Client 651
725	Inflow to Storage of Mixed Industrial Wastewater from Bytec Resource Management's Argyle Storage Tank (Outfall 001)
726	Inflow to Storage of Mixed Industrial Wastewater from Bytec Resource Management's Argyle Storage Tank (Outfall 021)
727	Inflow to Storage of Industrial Wastewater from Bytec Resource Management's Confidential Client #640.
728	Inflow to Storage of Industrial Wastewater from Bytec Resource Management's Confidential Client #673.
729	Inflow to Storage of Industrial Sludge from Byted Resource Management's confidential client #631.
730	Inflow to Slurrystore #1 of Septic Tank Waste
731	Inflow to Slurrystore #1 of Holding Tank Wastes
732	Inflow to Slurrystore #1 of Grease Trap Wastes
733	Inflow to Storage of Municipal Cake Sludge from Sun Prairie WWTF.
736	Inflow to Slurrystore #1 of Leachate from WSH Cake Pad #1 (Sewage Liquid Sludge).

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
737	Inflow to Storage of Wastewater from Bytec Resource Management Confidential Client #600.
738	Inflow to Storage of Industrial Liquid Wastewater from Brewster Cheese - Stockton Plant
739	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 660
740	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 694
741	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 637
742	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 650
743	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 654
744	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 687
745	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 627
746	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 636
747	Inflow to storage of Liquid Industrial Wastewater from Bytec Confidential Client #635
748	Inflow to Storage of municipal sludge from the Village of Ridgeway WWTP
749	Inflow to Storage of Liquid Industrial Wastewater from Dancing Goat Distillery
750	Inflow to Storage of Liquid Industrial Wastewater from Bytec Confidential Client 610.
751	Inflow to Storage of Industrial Wastewater from Bytec Confidential Client 627
752	Inflow to Storage of Liquid Industrial Wastewater from Agrifiber Solutions
753	Inflow to Storage of Industrial Wastewater from Bytec Confidential Client 637.
754	Inflow to Storage of Industrial Wastewater from Bytec Confidential Client 693
755	Inflow to Storage of Industrial Wastewater from AgroPur Inc.
756	Inflow to storage of industrial liquid waste from Bytec Confidential Client #684 (Industrial Liquid Waste).
757	Inflow to storage of process grease from Johnsonville Sausage (Industrial Liquid Sludge).
758	Inflow to storage of industrial liquid waste from M&J Industrial-Unilever (Industrial Liquid Waste).
801	Inflow to Slurrystore #1 of Liquid Municipal Biosolids from Beloit WWTF.
802	Inflow to Slurrystore #1 of Liquid Municipal Biosolids from Sharon WWTP
805	Inflow to Slurrystore #1 of Liquid Municipal Biosolids from Clinton WWTF
806	Inflow to Slurrystore #1 of Liquid Municipal Biosolids from Libertyville WWTF
807	Inflow to Slurrystore #1 of Liquid Municipal Biosolids from Johnson Creek WWTF
808	Inflow to Slurrystore #1 of Liquid Municipal Biosolids from Orfordville WWTF
809	Inflow to storage pad of municipal cake sludge from East Troy WWTP
810	Inflow to storage of municipal cake sludge from City of Brookfield WWTF
811	Inflow to cake pad storage of municipal cake sludge from Edgerton WWTF.
812	Inflow to Slurrystore #1 of liquid municipal sludge from Valley Ridge Clean Water Commission.
813	Inflow to Slurrystore #1 of sewage liquid sludge from Juneau WWTF (Sewage Liquid Sludge).
814	Inflow to Slurrystore #1 of sewage liquid sludge from Sun Prairie WWTP (Sewage Liquid Sludge).
815	Inflow to Slurrystore #1 of sewage liquid sludge from Rosendale WWTP (Sewage Liquid Sludge).
816	Inflow to Slurrystore #1 of leachate from Cake Pad #2 (Industrial Liquid Waste, Industrial Liquid Sludge, Sewage Liquid Sludge).

1.2 New Waste Stream Requirements

Each new waste material and source that has not been identified in the permit application shall be handled as described below.

1.2.1 Identifying New Waste Materials

For each new waste material that has not been identified in this permit, the permittee shall provide to the Department the information required in this subsection to identify the source and characteristics of the new waste material. The permittee shall not accept, handle, discharge to a storage or treatment unit or land apply any new waste material until Department approval has been granted.

The following shall be submitted to characterize each new waste material and source that has not been identified in the permit application.

1. The name, address, and contact person for each new client, customer or generator. If an independent trucking company is transporting waste material to the permittee's facility, the name of this company must also be submitted.
2. The type of waste material (e.g., treatment plant sludge, dairy permeate, off-spec or dated product, etc.) and industrial category (including SIC code, if applicable).
3. A detailed description of the industrial process or treatment system from which each individual waste material originates, regardless of the volume of the material.
4. SDS sheets for any specific chemicals that could be present in their original state in the waste material.
5. For each client, customer or generator, the annual volume of each waste material type anticipated to be received, the expected frequency received, volume per receipt event, and period of the year it will be received.
6. A description of the manner in which each waste material from each client, customer or waste generator will be processed and discharged under this permit, including if the waste is applied directly on land under this permit or if it is co-mingled with other wastes in a storage facility(s).
7. Laboratory analyses (from a certified or registered laboratory) shall be performed to characterize the chemical composition of the material. An analysis shall be performed on every waste material from each waste generator for the following:

COD, pH, TKN, Organic Nitrogen, Ammonia Nitrogen, Total Phosphorus, Chloride, Potassium. Include 'Total Solids' for sludge and other solid or semi-solid material.

Where it is believed that waste material may contain any of the substances shown immediately below or listed in Attachment 1 of this permit analyses shall be submitted for those substances.

Arsenic, Cadmium, Copper, Fecal Coliform, Lead, Mercury, Molybdenum, Nickel, Selenium, Zinc

In addition, if any waste material is received from a Primary Industry listed in Attachment 2 of this permit the results of a pollutant scan of that waste material for the applicable pollutant group shown in Attachment 2 shall be submitted. Analytical results shall be provided on a wet weight basis for liquid wastes and on a dry weight basis for sludge and other solid or semi-solid material.

8. Information that demonstrates that the land application of the waste material or the mixture of waste materials from a storage or treatment unit will be beneficial as a source of nutrients or a soil amendment or conditioner and not be detrimental to soils, crops or groundwater.
9. Verification that the new waste is not hazardous under NR 518.

Based on the information provided, the Department may request additional information on the quality or content of the material being proposed for storage or land application under this permit.

New Food Processing Wastes

The permittee may discharge to a storage or treatment unit and thereafter land apply new food processing wastes without Department pre-approval if the wastes are not hazardous as defined in Chapter NR 214. Immediately prior to discharge of any food processing wastes into a storage or treatment unit, the permittee shall take a representative sample of the material. The sample shall be analyzed in accordance with the terms of this section and the analysis of the new material shall be submitted to the Department within 30 days from the date the sample was taken. If the food processing waste is not approved by the Department in accordance with ch. NR 214 the material may not be stored or land applied again under this permit.

For the purposes of this section, food processing wastes means wastes associated with processing grains, dairy, fruits, vegetables, sugars, meats (except slaughtering), food flavorings and beverages. **Food processing wastes does not include any waste associated with ethanol production. The permittee shall obtain Department pre-approval for any new food processing waste that will be directly land applied under this permit**.

Prior to initiating land application of any new waste material, the permittee shall submit and obtain Department approval of an amended management plan. **The Department's approval of the amended management plan may designate an outfall number for the land application of the waste material and require additional monitoring to reflect the characteristics of the material.**

1.3 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.3.1 Sampling Point 701 - Pet Factory; 702- Dean Foods - Harvard; 703- WW Trucking Paunch Leachate; 704- Kemp Foods ; 705- Axium Foods; 706- Mars Chocolate; 707- Z Trim; 708- Bytec Confidential Client 620; 709- Bytec Confidential Client 622; 710- Bytec Confidential Client 632 ; 711- Bytec Confidential Client 633; 712- Bytec Confidential Client 650; 713- Bytec Confidential Client 665; 714- Grande Cheese - PGP; 715- Bytec Confidential Client 625; 716- Aveca/ Little Sioux Sludges; 717- Evansville WWTP; 718- Bytec Confidential Client 682; 719- Bytec Confidential Client 648; 720- Bytec Confidential Client 639; 721- Bytec Confidential Client 647; 722- Bytec Confidential Client 655; 723- Bytec Confidential Client 649; 724- Bytec Confidential Client 651; 725- Bytec Storage Outfall 001; 726- Bytec Storage Outfall 021; 727- Bytec Confidential Client 640; 728- Bytec Confidential Client 673; 729- Bytec Confidential Client 631; 737- Bytec Confidential Client 600; 738- Brewster Cheese (IL); 739- Bytec Confidential Client 660; 740- Bytec Confidential Client 694; 741- Bytec Confidential Client 637; 742- Bytec Confidential Client 650; 743- Bytec Confidential Client 654; 744- Bytec Confidential Client 687; 745- Bytec Confidential Client 627; 746- Bytec Confidential Client 636; 747- Bytec Confidential Client 635; 748- Ridgeway WWTP; 749- Dancing Goat Distillery ; 750- Bytec Confidential Client 610; 751- Bytec Confidential Client 627; 752- Agrifiber Solutions; 753- Bytec Confidential Client 637; 754- Bytec Confidential Client 693; 755- AgroPur Inc.; 756- Bytec Confidential Client 684; 757- Johnsonville Sausage; 758- M&J Industrial- Unilever; 801- Beloit WWTF; 802- Sharon WWTP ; 805- Clinton WWTF Mun Sludge; 806- Libertyville WWTF Mun Sludge; 807- Johnson Creek WWTF; 808- Orfordville WWTF; 812- Valley Ridge Clean Water Comm; 813- Juneau WWTF; 814- Sun Prairie WWTP; 815- Rosendale WWTP

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gpd	Daily	Estimated	

1.3.1.1 Flow Monitoring

Flow monitoring is only required on days when wastes from a sampling point are discharged into any of the storage or treatment units.

1.3.1.2 Monitoring Requirements – Discharge to Storage

The permittee shall maintain a daily log of the flow of waste material received from each sampling point and discharged to a storage or treatment unit. The log shall include a record of the client name, the type of waste, the volume and any characterization of the waste, the date of addition, and to which storage or treatment unit it was discharged. For each truck load received from a new waste generator that does not have an established contract with the permittee, the permittee shall obtain from its client a written verification of the waste type and maintain this as part of the records. This provision does not apply if the permittee and the waste generator have a contract which details waste characteristics and volume. If an independent trucking company is transporting the waste to the permittee's facility, the name of the trucking company must also be recorded. When a truckload contains more than one type of waste, the volume of each waste shall be noted.

1.3.2 Sampling Point 730 - Septic Tank Waste; 731- Holding Tank Waste; 732- Grease Trap Wastes

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gpd	Daily	Estimated	Septage Wastes

Septage Daily Inflow Log		
Septage Storage Monitoring Requirements The permittee shall maintain a daily inflow log that includes operational records of each load of septage hauled to the storage structure. These records shall be kept on a daily basis in the vehicle and shall be available for inspection at the office. These records shall be retained for five years.		
Parameters	**Units**	**Sample Frequency**
Inflow – Septic Tank	Gallons/Load	Daily
Inflow – Domestic Holding Tank	Gallons/Load	Daily
Inflow – Grease Trap Waste	Gallons/Load	Daily
Inflow – Portable Restroom Waste	Gallons/Load	Daily
Inflow to the storage facility shall also be totaled daily, monthly and annually for each waste type by the permittee		
Operational Records for Each Load of Septage The permittee shall record the following information in the daily inflow log for each load of septage hauled to the storage facility: • pick-up date and time • waste type and quantity • location and name of owner, and • other information specified in s. NR 113.11(3)(c), Wis. Adm. Code.		

1.3.2.1 Flow Monitoring

Flow monitoring is only required on days when wastes from a sampling point are discharged into any of the storage or treatment units.

1.3.2.2 Monitoring Requirements – Discharge to Storage

The permittee shall maintain a daily log of the volume of waste material received from each sampling point and discharged to a storage or treatment unit. The log shall include a record of the client name, the type of waste, the volume and any characterization of the waste, the date of addition, and to which storage or treatment unit it was discharged. For each truck load received from a new waste generator that does not have an established contract with the permittee, the permittee shall obtain from its client a written verification of the waste type and maintain this as part of the records. This provision does not apply if the permittee and the waste generator have a contract which details waste characteristics and volume. If an independent trucking company is transporting the waste to the permittee's facility, the name of the trucking company must also be recorded. When a truckload contains more than one type of waste, the volume of each waste shall be noted.

1.3.3 Sampling Point 733 - Sun Prairie Cake Sludge; 809- Bytec Confidential Client 901; 810- City of Brookfield WWTF; 811- Edgerton WWTF

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Volume		lbs/day	Daily	Estimated	Sewage Cake Sludge, Industrial Cake Sludge, and/or Industrial By-Product Solids

1.3.3.1 Volume Monitoring

Volume monitoring is only required on days when wastes from a sampling point are discharged into any of the storage or treatment units.

1.3.3.2 Monitoring Requirements – Discharge to Storage

The permittee shall maintain a daily log of the volume of waste material received from each sampling point and discharged to a storage or treatment unit. The log shall include a record of the client name, the type of waste, the volume and any characterization of the waste, the date of addition, and to which storage or treatment unit it was discharged. For each truck load received from a new waste generator that does not have an established contract with the permittee, the permittee shall obtain from its client a written verification of the waste type and maintain this as part of the records. This provision does not apply if the permittee and the waste generator have a contract which details waste characteristics and volume. If an independent trucking company is transporting the waste to the permittee's facility, the name of the trucking company must also be recorded. When a truckload contains more than one type of waste, the volume of each waste shall be noted.

1.3.4 Sampling Point 736 - Leachate from Cake Pad #1 and 816- Leachate from Cake Pad #2

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gal/month	Monthly	Estimated	Leachate generated onsite

1.3.4.1 Flow Monitoring

Flow monitoring is only required on days when leachate is discharged into storage.

2 Land Application Requirements

2.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
001	Land Application of Mixed Municipal Sludge, Industrial Wastewater, Industrial Sludge, and Septage Wastes from Steel, Glass Lined Tank designated as Slurrystore #1. Location: 2N, 15E, Section 21 SE1/4 of the SE1/4 (Industrial Liquid Waste, Industrial Liquid Sludge, Sewage Liquid Sludge, Septage).
002	Land Application of Municipal Cake Sludge from Cake Pad #1. Location: 2N, 15E, Section 21 SE1/4 of the SE1/4 (Sewage Cake Sludge).
005	Land application of mixed industrial liquid waste and industrial liquid sludge from the steel, glass-lined tank known as Slurrystore #2. Location: 2N, 15E, Section 21 SE1/4, SW1/4 (Industrial Liquid Waste, Industrial Liquid Sludge). PLACEHOLDER: DEPARTMENT APPROVAL REQUIRED PRIOR TO USE.
006	Land Application of mixed sewage cake sluge, industrial cake sludge, by-product solids, and non-CAFO manure from the cake pad located at 2N, 15E, Section 21 SE1/4, SW1/4 (Sewage Cake Sludge, Industrial Cake sludge, Industrial By-Product Solids, non-CAFO Manure). PLACEHOLDER: DEPARTMENT APPROVAL REQUIRED PRIOR TO USE.
601	Direct Land Application of Industrial Wastewater from Pet Factory (Industrial Liquid Waste).
602	Direct Land Application of Industrial Wastewater from Dean Foods – Harvard (Industrial Liquid Waste).
604	Direct Land Application of Industrial Sludge from Kemp Foods
605	Direct Land Application of Industrial Wastewater from Axium Foods (Industrial Liquid Waste).
606	Direct Land Application of Industrial Wastewater from Mars Chocolate (Industrial Liquid Waste).
607	Direct Land Application of Industrial Wastewater from Z Trim (Industrial Liquid Waste).

2.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

2.2.1 Sampling Point (Outfall) 001 – Slurrystore #1 (M+S+I)

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Weekly	Composite	Septage, Sewage Liquid Sludge, Industrial Liquid Waste, and Industrial Liquid Sludge
Arsenic Dry Wt	Ceiling	75 mg/kg	Quarterly	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Quarterly	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Quarterly	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Quarterly	Composite	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Copper Dry Wt	Ceiling	4,300 mg/kg	Quarterly	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Quarterly	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Quarterly	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Quarterly	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Quarterly	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Quarterly	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Quarterly	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Quarterly	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	Quarterly	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	Quarterly	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Quarterly	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Quarterly	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Quarterly	Composite	
Nitrogen, Total Kjeldahl		mg/L	Weekly	Composite	
Nitrogen, Ammonia (NH_3-N) Total		mg/L	Weekly	Composite	
Phosphorus, Total		mg/L	Weekly	Composite	
Phosphorus, Water Extractable		mg/L	Quarterly	Composite	
Potassium, Total Recoverable		mg/L	Weekly	Composite	
pH Field		su	Weekly	Grab	
Fecal Coliform		MPN/g TS	Quarterly	Composite	
Radium 226 Dry Wt		pCi/g	Annual	Composite	

2.2.1.1 Reporting – Monthly & Quarterly Characteristic Form 3400-49

The monitoring results shall be provided monthly for monthly monitoring and quarterly for quarterly monitoring to the Department by submitting a Form 3400-49 by no later than the 21st of the month following the calendar month or calendar quarter respectively during which the samples were taken. These forms shall be submitted electronically. If no discharge occurs during a calendar month, the permittee shall indicate on the reporting form that no discharge occurred during that month and no sampling is required. Where the sampling frequency is weekly for a parameter, average the sample results for the month and report that average on the Monthly Characteristic Form.

Daily Log – Monitoring Requirements and Limitations All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under "Records Retention" in the Standard Requirements section, and if requested, made available to the Department.				
Parameters	**Limit**	**Units**	**Sample Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Nitrogen applied per acre		Unit*/acre	Daily	Log

Daily Log – Monitoring Requirements and Limitations All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under "Records Retention" in the Standard Requirements section, and if requested, made available to the Department.				
Parameters	**Limit**	**Units**	**Sample Frequency**	**Sample Type**
Frozen Site Maximum Daily Loading Volume	Prohibited	Gal/Acre/Day	Daily	Calculated
Unfrozen Site Maximum Daily Loading Volume	See approved Land Management Plan and NR 204	Gal/Acre/Day	Daily	Calculated
Amount applied	-	As appropriate * /day	Daily as used	Log
Application rate per acre	-	unit */acre	Daily as used	Log
Method of Application	-	Injection, Incorporation, or surface applied	Daily as used	Log

*gallons, cubic yards, dry US Tons or dry Metric Tons

Annual Report – Monitoring Requirements and Limitations The Annual Report is due by January 31st of each year for the previous calendar year.				
Parameters	**Limit**	**Units**	**Reporting Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Volume Per Site	-	Gallons	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years	Annual	Calculated

2.2.1.2 Municipal Sludge and General Land Application Requirements

Additional land application requirements specific to municipal wastes are included in Section 2.3 and general requirements in Section 2.4.

2.2.1.3 Vector Attraction Reduction Requirements

The Department requires that municipal biosolids land applied from this outfall meet the vector attraction requirements of NR 204.07(7) Wis. Adm. Code. Requirements and procedures for vector attraction reduction, such as incorporation of municipal biosolids (if incorporation is selected as the method for vector attraction reduction), shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specified site-approval requirements, and the terms and conditions of this permit.

2.2.1.4 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

2.2.1.5 Biennial Site Chloride Loading

For details on chloride requirements see the "Chloride Requirements for Liquid Wastes and By-Product Solids" paragraph in the Standard Requirements section of this permit.

2.2.2 Sampling Point (Outfall) 002 - Cake Pad #1 (M)

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Quarterly	Composite	Sewage Cake Sludge
Arsenic Dry Wt	Ceiling	75 mg/kg	Quarterly	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Quarterly	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Quarterly	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Quarterly	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Quarterly	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Quarterly	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Quarterly	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Quarterly	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Quarterly	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Quarterly	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Quarterly	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Quarterly	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	Quarterly	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	Quarterly	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Quarterly	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Quarterly	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Quarterly	Composite	
Nitrogen, Total Kjeldahl		Percent	Quarterly	Composite	
Nitrogen, Ammonia (NH_3-N) Total		Percent	Quarterly	Composite	
Phosphorus, Total		Percent	Quarterly	Composite	
Phosphorus, Water Extractable		% of Tot P	Quarterly	Composite	
Potassium, Total Recoverable		Percent	Quarterly	Composite	
pH Field		su	Quarterly	Grab	
Fecal Coliform		MPN/g TS	Quarterly	Composite	
Radium 226 Dry Wt		pCi/g	Annual	Composite	

2.2.2.1 Reporting – Monthly & Quarterly Characteristic Form 3400-49

The monitoring results shall be provided monthly for monthly monitoring and quarterly for quarterly monitoring to the Department by submitting a Form 3400-49 by no later than the 21st of the month following the calendar month or

calendar quarter respectively during which the samples were taken. These forms shall be submitted electronically. If no discharge occurs during a calendar month, the permittee shall indicate on the reporting form that no discharge occurred during that month and no sampling is required.

Daily Land Application Log

Daily Land Application Log		
Discharge Monitoring Requirements and Limitations The permittee shall maintain a daily land application log for biosolids land applied each day when land application occurs. The following minimum records must be kept, in addition to all analytical results for the biosolids land applied. The log book records shall form the basis for the annual land application report requirements**.**		
Parameters	**Units**	**Sample Frequency**
DNR Site Number(s)	Number	Daily as used
Outfall number applied	Number	Daily as used
Acres applied	Acres	Daily as used
Amount applied	As appropriate * /day	Daily as used
Application rate per acre	unit */acre	Daily as used
Nitrogen applied per acre	lb/acre	Daily as used
Method of Application	Injection, Incorporation, or surface applied	Daily as used

*gallons, cubic yards, dry US Tons or dry Metric Tons

Annual Report – Monitoring Requirements and Limitations The Annual Report is due by January 31st of each year for the previous calendar year.				
Parameters	**Limit**	**Units**	**Reporting Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Volume Per Site	-	Gallons	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated

2.2.2.2 Municipal Sludge and General Land Application Requirements

Additional land application requirements specific to municipal wastes are included in Section 2.3 and general requirements in Section 2.4.

2.2.2.3 Vector Attraction Reduction Requirements

The Department requires that municipal biosolids land applied from this outfall meet the vector attraction requirements of NR 204.07(7) Wis. Adm. Code. Requirements and procedures for vector attraction reduction, such as incorporation of municipal biosolids (if incorporation is selected as the method for vector attraction reduction), shall

be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specified site-approval requirements, and the terms and conditions of this permit.

2.2.2.4 Site Nitrogen Loading

All sludge management activities shall be conducted in compliance with Ch. NR 204 "Domestic Sewage Sludge Management", Wis. Adm. Code.

2.2.3 Sampling Point (Outfall) 005 - PH: Slurrystore #2 (I)

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Weekly	Composite	Industrial Liquid Waste, Industrial Liquid Sludge
Nitrogen, Total Kjeldahl		mg/L	Weekly	Composite	
Nitrogen, Ammonia (NH_3-N) Total		mg/L	Weekly	Composite	
Phosphorus, Total		mg/L	Weekly	Composite	
Phosphorus, Water Extractable		% of Tot P	Quarterly	Composite	
Potassium, Total Recoverable		mg/L	Weekly	Composite	
Chloride		mg/L	Weekly	Composite	
COD		mg/L	Monthly	Composite	
pH Field		su	Weekly	Grab	

2.2.3.1 Reporting – Monthly & Quarterly Characteristic Form 3400-49

The monitoring results shall be provided monthly for monthly monitoring and quarterly for quarterly monitoring to the Department by submitting a Form 3400-49 by no later than the 21st of the month following the calendar month or calendar quarter respectively during which the samples were taken. These forms shall be submitted electronically. If no discharge occurs during a calendar month, the permittee shall indicate on the reporting form that no discharge occurred during that month and no sampling is required.

Daily Log – Monitoring Requirements and Limitations All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under "Records Retention" in the Standard Requirements section, and if requested, made available to the Department.				
Parameters	**Limit**	**Units**	**Sample Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Nitrogen applied per acre		Unit*/acre	Daily	Log
Frozen Site Maximum Daily Loading Volume	6,800	Gal/Acre/Day	Daily	Calculated

Daily Log – Monitoring Requirements and Limitations All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under "Records Retention" in the Standard Requirements section, and if requested, made available to the Department.				
Parameters	**Limit**	**Units**	**Sample Frequency**	**Sample Type**
Unfrozen Site Maximum Daily Loading Volume	See NR 214	Gal/Acre/Day	Daily	Calculated
Amount applied	-	As appropriate * /day	Daily as used	Log
Application rate per acre	-	unit */acre	Daily as used	Log
Method of Application	-	Injection, Incorporation, or surface applied	Daily as used	Log

*gallons, cubic yards, dry US Tons or dry Metric Tons

Annual Report – Monitoring Requirements and Limitations The Annual Report is due by January 31st of each year for the previous calendar year.				
Parameters	**Limit**	**Units**	**Reporting Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Volume Per Site	-	Gallons	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years	Annual	Calculated

2.2.3.2 General Land Application Requirements

Additional land application requirements specific to general requirements Section 2.4.

2.2.3.3 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

2.2.3.4 Biennial Site Chloride Loading

For details on chloride requirements see the "Chloride Requirements for Liquid Wastes and By-Product Solids" paragraph in the Standard Requirements section of this permit.

2.2.4 Sampling Point (Outfall) 006 - PH: Cake Pad #2 (M+I)

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Quarterly	Composite	Sewage Cake Sludge, Industrial Cake Sludge, By-Product Solids
Arsenic Dry Wt	Ceiling	75 mg/kg	Quarterly	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Quarterly	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Quarterly	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Quarterly	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Quarterly	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Quarterly	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Quarterly	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Quarterly	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Quarterly	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Quarterly	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Quarterly	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Quarterly	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	Quarterly	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	Quarterly	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Quarterly	Composite	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Quarterly	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Quarterly	Composite	
Nitrogen, Total Kjeldahl		Percent	Quarterly	Composite	
Nitrogen, Ammonia (NH_3-N) Total		Percent	Quarterly	Composite	
Phosphorus, Total		Percent	Quarterly	Composite	
Phosphorus, Water Extractable		% of Tot P	Quarterly	Composite	
Potassium, Total Recoverable		Percent	Quarterly	Composite	
pH Field		su	Quarterly	Grab	
Fecal Coliform		MPN/g TS	Quarterly	Composite	
Radium 226 Dry Wt		pCi/g	Annual	Composite	

2.2.4.1 Reporting – Monthly & Quarterly Characteristic Form 3400-49

The monitoring results shall be provided monthly for monthly monitoring and quarterly for quarterly monitoring to the Department by submitting a Form 3400-49 by no later than the 21st of the month following the calendar month or calendar quarter respectively during which the samples were taken. These forms shall be submitted electronically. If no discharge occurs during a calendar month, the permittee shall indicate on the reporting form that no discharge occurred during that month and no sampling is required.

Daily Land Application Log

Daily Land Application Log		
Discharge Monitoring Requirements and Limitations The permittee shall maintain a daily land application log for biosolids land applied each day when land application occurs. The following minimum records must be kept, in addition to all analytical results for the biosolids land applied. The log book records shall form the basis for the annual land application report requirements**.**		
Parameters	**Units**	**Sample Frequency**
DNR Site Number(s)	Number	Daily as used
Outfall number applied	Number	Daily as used
Acres applied	Acres	Daily as used
Amount applied	As appropriate * /day	Daily as used
Application rate per acre	unit */acre	Daily as used
Nitrogen applied per acre	lb/acre	Daily as used
Total Chloride applied per acre	lb/acre	Daily as used
Method of Application	Injection, Incorporation, or surface applied	Daily as used

*gallons, cubic yards, dry US Tons or dry Metric Tons

Annual Land Application Report

Annual Report – Monitoring Requirements and Limitations The Annual Report is due by January 31st of each year for the previous calendar year.				
Parameters	**Limit**	**Units**	**Reporting Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Volume Per Site	-	Gallons	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated

2.2.4.2 Municipal Sludge and General Land Application Requirements

Additional land application requirements specific to municipal wastes are included in Section 2.3 and general requirements in Section 2.4.

2.2.4.3 Vector Attraction Reduction Requirements

The Department requires that municipal biosolids land applied from this outfall meet the vector attraction requirements of NR 204.07(7) Wis. Adm. Code. Requirements and procedures for vector attraction reduction, such as incorporation of municipal biosolids (if incorporation is selected as the method for vector attraction reduction), shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee

shall comply with the requirements in the Department approved management plan, specified site-approval requirements, and the terms and conditions of this permit.

2.2.4.4 Sampling

Representative samples shall be collected of the byproduct solids to be land applied. When the byproduct solids are large pieces, a large sample should be collected and ground to a homogenous slurry for analysis.

2.2.4.5 Carbon to Nitrogen Ratio

In addition to the limitation on nitrogen, the total quantity of by-product solids applied to the soil shall be within acceptable agricultural practices with respect to the carbon to nitrogen ratio.

2.2.4.6 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

2.2.4.7 Biennial Site Chloride Loading

For details on chloride requirements see the "Chloride Requirements for Liquid Wastes and By-Product Solids" paragraph in the Standard Requirements section of this permit.

2.2.5 Sampling Point (Outfall) 601 - Direct Land - Pet Factory; 602- Direct Land Dean Foods Harvard; 605- Direct Land Axium Foods; 606- Direct Land Mars Chocolate, and 607- Direct Land Z Trim

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Total Kjeldahl		mg/L	Quarterly	Grab	Direct Land Application: Industrial Liquid Waste or Industrial Liquid Sludge
Phosphorus, Total		mg/L	Quarterly	Grab	
COD		mg/L	Quarterly	Grab	
Chloride		mg/L	Quarterly	Grab	
pH Field		su	Quarterly	Grab	
Nitrogen, Ammonia (NH_3-N) Total		mg/L	Quarterly	Grab	
Potassium, Total Recoverable		mg/L	Quarterly	Grab	
Phosphorus, Water Extractable		mg/L	Quarterly	Grab	

2.2.5.1 Reporting – Monthly & Quarterly Characteristic Form 3400-49

The monitoring results shall be provided monthly for monthly monitoring and quarterly for quarterly monitoring to the Department by submitting a Form 3400-49 by no later than the 21st of the month following the calendar month or calendar quarter respectively during which the samples were taken. These forms shall be submitted electronically. If no discharge occurs during a calendar month, the permittee shall indicate on the reporting form that no discharge occurred during that month and no sampling is required. Where the sampling frequency is weekly for a parameter, average the sample results for the month and report that average on the Monthly Characteristic Form.

Daily Land Application Log

Daily Land Application Log		
Discharge Monitoring Requirements and Limitations The permittee shall maintain a daily land application log for biosolids land applied each day when land application occurs. The following minimum records must be kept, in addition to all analytical results for the biosolids land applied. The log book records shall form the basis for the annual land application report requirements**.**		
Parameters	**Units**	**Sample Frequency**
DNR Site Number(s)	Number	Daily as used
Outfall number applied	Number	Daily as used
Acres applied	Acres	Daily as used
Frozen Site Maximum Daily Loading Volume	6,800	Gal/Acre/Day
Unfrozen Site Maximum Daily Loading Volume	13,500	Gal/Acre/Day
Weekly Loading Volume	See NR 214 - Tbl 3	Inches/Week
Nitrogen applied per acre	lb/acre	Daily as used
Total Chloride applied per acre	lb/acre	Daily as used
Method of Application	Injection, Incorporation, or surface applied	Daily as used

*gallons, cubic yards, dry US Tons or dry Metric Tons

Annual Report – Monitoring Requirements and Limitations The Annual Report is due by January 31st of each year for the previous calendar year.				
Parameters	**Limit**	**Units**	**Reporting Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Volume Per Site	-	Gallons	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years	Annual	Calculated

2.2.5.2 General Land Application Requirements

Additional land application requirements specific to general requirements in Section 2.4.

2.2.5.3 Discharge to Approved Manure Pits

Pursuant to s. NR214.17(1), Wisconsin Administrative Code, an exemption may be granted in writing to certain provisions of NR 214 for discharges to manure pits, provided industrial wastes are less than 10% of the mixture contained in the manure pit at the time it is landspread.

2.2.5.4 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

2.2.5.5 Biennial Site Chloride Loading

For details on chloride requirements see the "Chloride Requirements for Liquid Wastes and By-Product Solids" paragraph in the Standard Requirements section of this permit.

2.2.6 Sampling Point (Outfall) 604 - Direct Land Kemp Foods

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Quarterly	Grab	Direct Land Application: Industrial Cake Sludge or By-Product Solids
Nitrogen, Total Kjeldahl		Percent	Quarterly	Grab	
Nitrogen, Ammonia (NH_3-N) Total		Percent	Quarterly	Grab	
Chloride		Percent	Quarterly	Grab	
COD		Percent	Quarterly	Grab	
pH Field		su	Quarterly	Grab	
Phosphorus, Total		Percent	Quarterly	Grab	
Phosphorus, Water Extractable		% of Tot P	Quarterly	Grab	
Potassium, Total Recoverable		Percent	Quarterly	Grab	

2.2.6.1 Reporting – Monthly & Quarterly Characteristic Form 3400-49

The monitoring results shall be provided monthly for monthly monitoring and quarterly for quarterly monitoring to the Department by submitting a Form 3400-49 by no later than the 21st of the month following the calendar month or calendar quarter respectively during which the samples were taken. These forms shall be submitted electronically. If no discharge occurs during a calendar month, the permittee shall indicate on the reporting form that no discharge occurred during that month and no sampling is required.

Daily Land Application Log

Daily Land Application Log		
Discharge Monitoring Requirements and Limitations The permittee shall maintain a daily land application log for biosolids land applied each day when land application occurs. The following minimum records must be kept, in addition to all analytical results for the biosolids land applied. The log book records shall form the basis for the annual land application report requirements**.**		
Parameters	**Units**	**Sample Frequency**
DNR Site Number(s)	Number	Daily as used
Outfall number applied	Number	Daily as used
Acres applied	Acres	Daily as used
Amount applied	As appropriate * /day	Daily as used
Application rate per acre	unit */acre	Daily as used
Nitrogen applied per acre	lb/acre	Daily as used
Total Chloride applied per acre	lb/acre	Daily as used
Method of Application	Injection, Incorporation, or surface applied	Daily as used

*gallons, cubic yards, dry US Tons or dry Metric Tons

Annual Report – Monitoring Requirements and Limitations The Annual Report is due by January 31st of each year for the previous calendar year.				
Parameters	**Limit**	**Units**	**Reporting Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Volume Per Site	-	Gallons	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years	Annual	Calculated

2.2.6.2 General Land Application Requirements

Additional land application requirements specific to general requirements in Section 2.4.

2.2.6.3 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

2.2.6.4 Biennial Site Chloride Loading

For details on chloride requirements see the "Chloride Requirements for Liquid Wastes and By-Product Solids" paragraph in the Standard Requirements section of this permit.

2.3 Municipal Sludge Land Application Requirements

This section applies to the management, storage, and application of any outfall containing municipal biosolids.

2.3.1 Sludge Management

All sludge management activities shall be conducted in compliance with Ch. NR 204 "Domestic Sewage Sludge Management", Wis. Adm. Code.

2.3.2 Winter Land Application Prohibition:

Land application of material containing municipal sludge on frozen or snow covered soils is prohibited.

2.3.3 Sludge Which Exceeds the Ceiling Limit:

Land application is not permitted if any of the Ceiling limits shown in the 'Monitoring Requirements and Limitations' table are exceeded.

2.3.4 Sludge Which Exceeds the High Quality Limit:

If the High Quality Limit is exceeded for any parameter, the permittee shall not exceed the Lifetime Cumulative Metal Loading Limit for the parameters shown in the 'Lifetime Cumulative Metal Loadings' table below. Cumulative pollutant loading records shall be kept for all land application of sludge which does not meet the High Quality Limit for any parameter. This requirement applies for the entire calendar year in which any exceedance of the High Quality Limit occurs. Such loading records shall be kept for all parameters shown in the 'Lifetime Cumulative Metal Loadings' table for each site on which land application occurs in that calendar year. The formula to be used for calculating cumulative loading is as follows:

[(Pollutant concentration (mg/kg) x dry tons applied/ac) ÷ 500] + previous loading (lbs/acre) = cumulative lbs pollutant per acre

When a site reaches 90% of the allowable cumulative loading for any metal shown in the 'Lifetime Cumulative Metal Loadings' table, the Department shall be so notified through letter or in the comment section of the annual land application report (3400-55).

Lifetime Cumulative Metal Loadings (for Municipal Sludge)	
Metal	**Limit (lbs/Acre)**
Arsenic	36
Cadmium	34
Copper	1339
Lead	268
Mercury	15

Nickel	375
Selenium	89

2.3.5 Other Municipal Sludge Requirements

Other Municipal Sludge Requirements	
Sludge Requirements	**Sample Frequency**
Pathogen Control: The requirements shall be met prior to land application of sludge.	**Quarterly**
Vector Attraction Reduction: The vector attraction reduction shall be satisfied prior to, or at the time of land application.	**Quarterly**

PATHOGEN CONTROL FOR CLASS B MUNICIPAL SLUDGE

The permittee shall implement pathogen control as listed below. The Department shall be notified of the pathogen control utilized and shall be notified when the permittee decides to utilize alternative pathogen control.

The following requirements shall be met prior to land application of sludge

Parameter	**Unit**	**Limit**
Fecal Coliform*	MPN/gTS or CFU/gTS	2,000,000
OR, ONE OF THE FOLLOWING PROCESS OPTIONS		
Aerobic Digestion	Air Drying	
Anaerobic Digestion	Composting	
Alkaline Stabilization	PSRP Equivalent Process	
***** The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis.		

VECTOR ATTRACTION REDUCTION REQUIREMENTS FOR MUNICIPAL SLUDGE

The permittee shall implement any one of the vector attraction reduction options. The Department shall be notified of the option utilized and shall be notified when the permittee decides to utilize an alternative option.

One of the following shall be satisfied prior to, or at the time of land application.

Option	**Limit**	**Where/When it Shall be Met**
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O_2/hr/g TS	On aerobic stabilized sludge
Anaerobic bench-scale test	<17 % VS reduction	On anaerobic digested sludge
Aerobic bench-scale test	<15 % VS reduction	On aerobic digested sludge
Aerobic Process	>14 days, Temp >40°C and Avg. Temp > 45°C	On composted sludge
pH adjustment	>12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours)	During the process
Drying without primary solids	>75 % TS	When applied or bagged
Drying with primary solids	>90 % TS	When applied or bagged

VECTOR ATTRACTION REDUCTION REQUIREMENTS FOR MUNICIPAL SLUDGE The permittee shall implement any one of the vector attraction reduction options. The Department shall be notified of the option utilized and shall be notified when the permittee decides to utilize an alternative option. One of the following shall be satisfied prior to, or at the time of land application.		
Option	**Limit**	**Where/When it Shall be Met**
Equivalent Process	Approved by the Department	Varies with process
Injection	-	When applied
Incorporation	-	Within 6 hours of application

2.4 General Land Application Requirements

This section applies to the management, storage, and application of all land application outfalls (industrial, municipal, and comingled waste code outfalls).

2.4.1 Reauthorization of Land Application Sites

Prior to the first use during the term of the reissued permit of a previously approved site, the permittee shall notify the Department Basin Representative of its intent to apply wastes to the site. The permittee shall provide information on any changes in the site characteristics since the previous approval. The permittee shall not use the site until an updated approval is provided by the Department. In the event the Department does not approve or deny the use of the site within 7 business days after notification of its intent to use the site, the permittee may apply waste to the site under the conditions of its previous approval, pending further action by the Department. Upon notification by Department staff of the unacceptability of a site, the permittee shall immediately discontinue use of the site.

2.4.2 Land Application from Storage

Prior to any land application from a storage or treatment unit representative sample results shall be available from the storage or treatment unit for the parameters shown in the monitoring table for the respective outfalls. During land application, samples shall be collected and analyzed for the parameters at the frequency shown in the monitoring table for the respective outfalls, or as modified for new waste material in an approved management plan. The most recent analytical data shall be used to establish land application rates to ensure compliance with permit limits. Sampling procedures shall be addressed in the approved management plan.

2.4.3 Record Keeping and Reporting

The permittee shall maintain records consisting of the volume, application rate, date of application and any characterizations of waste land applied to each approved land application site (by Outfall and site number) and land application daily logs. With the exception of wastes containing municipal sludge for which records must be retained for a minimum of 5 years, the permittee shall retain the original daily logs and sample results for a period of at least 3 years. This information shall be made available to Department staff for inspection upon request.

The permittee shall maintain as part of the records any written waste verification required pursuant to the subsection titled ‘Monitoring Requirements – Discharge to Storage’.

For each load, the permittee shall obtain from its client a written certification of the waste type discharged to storage or directly to land application and maintain this as part of the records.

Land application monitoring results shall be provided to the Department by submitting a LAMP Form 3400-49 for each designated outfall no later than the 21 days after the end of the specified reporting period during which the samples were taken. These forms shall be submitted electronically in accordance with the e-reporting instructions at

http://dnr.wi.gov/topic/wastewater/documents/3400-049instructions.pdf. If no discharge occurs during a specified reporting period, the permittee shall indicate on the reporting form that no land application occurred during that period.

The totals for the land application loadings of waste for each designated outfall shall be submitted no later than 15 days after the end of the specified reporting period that wastes were land applied in a format similar to the Annual 3400-55 form. (The method of providing this information shall be approved in the management plan.) These land application forms shall be submitted to the Department Basin Representative.

Annual 3400-55 forms shall be submitted electronically in accordance with the e-reporting instructions at http://dnr.wi.gov/topic/wastewater/documents/3400-055instructions.pdf and include the sum of each months activity.

2.4.4 Operating Requirements/Management Plan

All land application sites used for treatment of liquid wastes, by-product solids, municipal biosolids, septage waste (septage tank, holding tank, and grease trap), and/or industrial sludge shall be operated in accordance with a Department approved management plan. The management plan shall be consistent with the requirements of this permit, ch. NR 113, NR 204, and/or NR 214 Wis. Adm. Code (as applicable for each designated outfall). To ensure this consistency the management plan shall address:

- the information identified in s NR 204.07, 204.11(1), NR 214.17(6) and NR 214.18 (6) Wis. Adm. Code;
- record keeping and maintenance, including responsible individuals;
- a full description of calculations used to determine appropriate application rates and loadings delivered to land application sites;
- tracking of site loading;
- the method for reporting monthly land application loadings from each outfall;
- notification and mitigation procedures for handling wastes that deviate from those anticipated; and
- odor control.

The management plan shall also describe waste acceptance procedures which ensure that waste material placed in storage have characteristics and volume similar to those contained in the permit application and authorized by this permit and that such waste materials contain no characteristics that could be reasonably expected to prevent compliance with this permit. These procedures may include representative sampling and analysis for COD, pH, TKN, total phosphorus, chloride or other pollutant parameters as necessary.

The Department shall be notified prior to any land application of waste material from a storage tank, lagoon or pad. The management plan shall contain a description of the manner by which this notification will occur. All such notifications shall occur at a reasonable time prior to the land application event and shall include a list of sites anticipated for use during those events. Similar procedures shall be described for direct land application events so Department staff are aware of what will be applied and when it will be applied.

A new or updated land application management plan shall be submitted for approval at least 60 days prior to land application for new permits and within 60 days after reissuance for existing permits. If operational changes are needed, the land application management plan shall be amended by submitting a written request to the Department for approval of such amendments.

3 Schedules

3.1 Land Application Management Plan

Required Action	Due Date
Management Plan Submittal: Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with Section 2.4.4 of the permit (Operating Requirements/Management Plan), by the Due Date. This management plan shall 1) specify information on pretreatment processes (if any); 2) identify land application sites; 3) describe site limitations; 4) address vegetative cover management and removal; 5) specify availability of storage; 6) describe the type of transporting and spreading vehicle(s); 7) specify monitoring procedures; 8) track site loading; 9) address contingency plans for adverse weather and odor/nuisance abatement; and 10) include any other pertinent information. Once approved, all landspreading activities shall be conducted in accordance with the plan. Any changes to the plan must be approved by the Department prior to implementing the changes.	04/01/2017
Update to Land Management Plan: The permittee shall submit an updated land management plan to the department to show compliance with section 2.4.4 of this permit. This update shall address any changes in operations as a result of the permit modification, in addition to any operational deficiencies as identified by the permittee or the department.	01/01/2021

4 Standard Requirements

NR 205, Wisconsin Administrative Code: The conditions in ss. NR 205.07(1) and NR 205.07(2), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(2).

4.1 Reporting and Monitoring Requirements

4.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a principal executive officer, a ranking elected official or other duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

4.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

4.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

4.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.

- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.

- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD_5 and Total Suspended Solids shall be considered to be limits of quantitation

- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

4.1.5 Compliance Maintenance Annual Reports

Compliance Maintenance Annual Reports (CMAR) shall be completed using information obtained over each calendar year regarding the wastewater conveyance and treatment system. The CMAR shall be submitted by the permittee in accordance with ch. NR 208, Wis. Adm. Code, by June 30, each year on an electronic report form provided by the Department.

In the case of a publicly owned treatment works, a resolution shall be passed by the governing body and submitted as part of the CMAR, verifying its review of the report and providing responses as required. Private owners of wastewater treatment works are not required to pass a resolution; but they must provide an Owner Statement and responses as required, as part of the CMAR submittal.

A separate CMAR certification document, that is not part of the electronic report form, shall be mailed to the Department at the time of electronic submittal of the CMAR. The CMAR certification shall be signed and submitted by an authorized representative of the permittee. The certification shall be submitted by mail. The certification shall verify the electronic report is complete, accurate and contains information from the owner's treatment works.

4.1.6 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application. All pertinent sludge information, including permit application information and other documents specified in this permit or s. NR 204.06(9), Wis. Adm. Code shall be retained for a minimum of 5 years.

4.1.7 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

4.2 System Operating Requirements

4.2.1 Noncompliance Reporting

Sanitary sewer overflows and sewage treatment facility overflows shall be reported according to the 'Sanitary Sewer Overflows and Sewage Treatment Facility Overflows' section of this permit.

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from a bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department's regional office within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill**. **To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003.**

4.2.2 Flow Meters

Flow meters shall be calibrated annually, as per s. NR 218.06, Wis. Adm. Code.

4.2.3 Raw Grit and Screenings

All raw grit and screenings shall be disposed of at a properly licensed solid waste facility or picked up by a licensed waste hauler. If the facility or hauler are located in Wisconsin, then they shall be licensed under chs. NR 500-536, Wis. Adm. Code.

4.2.4 Sludge Management

All sludge management activities shall be conducted in compliance with ch. NR 204 "Domestic Sewage Sludge Management", Wis. Adm. Code.

4.2.5 Prohibited Wastes

Under no circumstances may the introduction of wastes prohibited by s. NR 211.10, Wis. Adm. Code, be allowed into the waste treatment system. Prohibited wastes include those:

- which create a fire or explosion hazard in the treatment work;
- which will cause corrosive structural damage to the treatment work;
- solid or viscous substances in amounts which cause obstructions to the flow in sewers or interference with the proper operation of the treatment work;

- wastewaters at a flow rate or pollutant loading which are excessive over relatively short time periods so as to cause a loss of treatment efficiency; and
- changes in discharge volume or composition from contributing industries which overload the treatment works or cause a loss of treatment efficiency.

4.2.6 Bypass

This condition applies only to bypassing at a sewage treatment facility that is not a scheduled bypass, approved blending as a specific condition of this permit, a sewage treatment facility overflow or a controlled diversion as provided in the sections titled 'Scheduled Bypass', 'Blending' (if approved), 'SSO's and Sewage Treatment Facility Overflows' and 'Controlled Diversions' of this permit. Any other bypass at the sewage treatment facility is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the Noncompliance Reporting section of this permit.

4.2.7 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for bypassing specified in the above section titled 'Bypass' are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

4.2.8 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation. Sewage treatment facilities that have multiple treatment units to treat variable or seasonal loading conditions may shut down redundant treatment units when necessary for efficient operation. The following requirements shall be met during controlled diversions:

- Effluent from the sewage treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion does not include blending as defined in s. NR 210.03(2e), Wis. Adm. Code, and as may only be approved under s. NR 210.12. A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and

- All instances of controlled diversions shall be documented in sewage treatment facility records and such records shall be available to the department on request.

4.2.9 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. The wastewater treatment facility shall be under the direct supervision of a state certified operator as required in s. NR 108.06(2), Wis. Adm. Code. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4.2.10 Spill Reporting

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

4.2.11 Planned Changes

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

4.2.12 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

4.3 Land Application Requirements

4.3.1 Sludge Management Program Standards And Requirements Based Upon Federally Promulgated Regulations

In the event that new federal sludge standards or regulations are promulgated, the permittee shall comply with the new sludge requirements by the dates established in the regulations, if required by federal law, even if the permit has not yet been modified to incorporate the new federal regulations.

4.3.2 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

4.3.3 Sludge Samples

All sludge samples shall be collected at a point and in a manner which will yield sample results which are representative of the sludge being tested, and collected at the time which is appropriate for the specific test.

4.3.4 Land Application Characteristic Report

Each report shall consist of a Characteristic Form 3400-49 and Lab Report. The Characteristic Report Form 3400-49 shall be submitted electronically by January 31 following each year of analysis.

Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report is true, accurate and complete. The Lab Report must be sent directly to the facility's DNR sludge representative or basin engineer unless approval for not submitting the lab reports has been given.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All results shall be reported on a dry weight basis.

4.3.5 Calculation of Water Extractable Phosphorus

When sludge analysis for Water Extractable Phosphorus is required by this permit, the permittee shall use the following formula to calculate and report Water Extractable Phosphorus:
Water Extractable Phosphorus (% of Total P) =
[Water Extractable Phosphorus (mg/kg, dry wt) ÷ Total Phosphorus (mg/kg, dry wt)] x 100

4.3.6 Annual Land Application Report

Land Application Report Form 3400-55 shall be submitted electronically by January 31, each year whether or not non-exceptional quality sludge is land applied. Non-exceptional quality sludge is defined in s. NR 204.07(4), Wis. Adm. Code. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the 'eReport Certify' page by a principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

4.3.7 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the 'eReport Certify' page by a principal executive officer, ranking elected official or duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

4.3.8 Approval to Land Apply

Bulk non-exceptional quality sludge as defined in s. NR 204.07(4), Wis. Adm. Code, may not be applied to land without a written approval letter or Form 3400-122 from the Department unless the Permittee has obtained permission from the Department to self approve sites in accordance with s. NR 204.06 (6), Wis. Adm. Code. Analysis of sludge characteristics is required prior to land application. Application on frozen or snow covered ground is restricted to the extent specified in s. NR 204.07(3) (l), Wis. Adm. Code.

4.3.9 Soil Analysis Requirements

Each site requested for approval for land application must have the soil tested prior to use. Each approved site used for land application must subsequently be soil tested such that there is at least one valid soil test in the four years prior to land application. All soil sampling and submittal of information to the testing laboratory shall be done in accordance with UW Extension Bulletin A-2100. The testing shall be done by the UW Soils Lab in Madison or Marshfield, WI or at a lab approved by UW. The test results including the crop recommendations shall be submitted to the DNR contact listed for this permit, as they are available. Application rates shall be determined based on the crop nitrogen recommendations and with consideration for other sources of nitrogen applied to the site.

4.3.10 Land Application Site Approval

The permittee is authorized to landspread permitted liquid wastes, by-product solids and sludges on sites approved in writing by the Department in accordance with ss. NR 214.17(2) and 214.18(2), Wis. Adm. Code. Any site use restrictions or granting of case-by-case exceptions shall be identified in the approval letter. If the permittee wishes to have approval for additional sites, application shall be made using Land Application Site Request Form 3400-053. Complete information shall be submitted about each site, including location maps and soil maps, any soil analyses results and other information showing that the site complies with all application requirements and permit conditions. Spreading on a site may commence upon receipt of Department approval. If an existing spreading site is found by the Department to be environmentally unacceptable, a written notice will be issued to withdraw approval of that site.

4.3.11 Land Application Site Evaluation

For non-exceptional quality sludge, as defined in s. NR 204.07(4), Wis. Adm. Code, a Land Application Site Request Form 3400-053 shall be submitted to the Department for the proposed land application site. The Department will evaluate the proposed site for acceptability and will either approve or deny use of the proposed site. The permittee may obtain permission to approve their own sites in accordance with s. NR 204.06(6), Wis. Adm. Code.

4.3.12 Class B Sludge: Fecal Coliform Limitation

Compliance with the fecal coliform limitation for Class B sludge shall be demonstrated by calculating the geometric mean of at least 7 separate samples. (Note that a Total Solids analysis must be done on each sample). The geometric mean shall be less than 2,000,000 MPN or CFU/g TS. Calculation of the geometric mean can be done using one of the following 2 methods.

Method 1:

Geometric Mean = $(X_1 \times X_2 \times X_3 \ldots \times X_n)^{1/n}$

Where X = Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Method 2:

Geometric Mean = antilog$[(X_1 + X_2 + X_3 \ldots + X_n) \div n]$

Where X = $\log_{10}$ of Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Example for Method 2

Sample Number	Coliform Density of Sludge Sample	$\log_{10}$
1	6.0×10^5	5.78
2	4.2×10^6	6.62
3	1.6×10^6	6.20
4	9.0×10^5	5.95
5	4.0×10^5	5.60
6	1.0×10^6	6.00
7	5.1×10^5	5.71

The geometric mean for the seven samples is determined by averaging the $\log_{10}$ values of the coliform density and taking the antilog of that value.

$(5.78 + 6.62 + 6.20 + 5.95 + 5.60 + 6.00 + 5.71) \div 7 = 5.98$
The antilog of $5.98 = 9.5 \times 10^5$

4.3.13 Operating Requirements/Management Plan

All land application sites used for treatment of liquid wastes, by-product solids and sludges shall be operated in accordance with a Department approved management plan. The management plan shall be consistent with the requirements of this permit, ss. NR 214.17 (3) and (6), and NR 214.18 (3) and (6), Wis. Adm. Code. If operational changes are needed, the land application management plan shall be amended by submitting a written request to the Department for approval. A land application management plan shall be submitted for approval at least 60 days prior to land application.

4.3.14 Chloride Requirements for Liquid Wastes and By-Product Solids

The total pounds of chloride applied shall be limited to 340 pounds per acre per 2 year period. Calculate the chloride loading as follows:

$$\text{Wet Weight Solids: } \frac{\text{lbs of solids} \times \%\text{solids} \times \%\text{chloride}}{\text{acres land applied} \times 100 \times 100} = \text{lbs chloride/acre}$$

$$\text{Liquid: } \frac{\text{mg/L chloride} \times (\text{millions of gallons}) \times 8.34}{\text{acres land applied}} = \text{lbs chloride/acre}$$

4.3.15 Nitrogen Requirements for Municipal Biosolids, Comingled Waste, Liquid Industrial Wastes, By-Product Solids, and Sludges

4.3.15.1 Nitrogen Requirements for Municipal Biosolids

"All sludge management activities shall be conducted in compliance with Ch. NR 204 "Domestic Sewage Sludge Management", Wis. Adm. Code."

4.3.15.2 Nitrogen Requirements for Comingled Waste, Liquid Industrial Wastes, By-Product Solids, and Sludges

NR 214.17(4) and NR 214.18(4) Wis. Adm. Code specify that the total pounds of nitrogen land applied per acre per year shall be limited to the nitrogen needs of the cover crop minus any other nitrogen added to the land application site, including fertilizer or manure. Nitrogen applied can be calculated on the basis of plant available nitrogen, as long as the release of nitrogen from the organic material is credited to future years. This permit requires that the Total Kjeldahl Nitrogen calendar year application amount shall not exceed 165 pounds per acre per year, except when alternate numerical nitrogen loading limits (consistent with the above sections of NR 214) are approved in writing via the Department's land application management plan approval. Calculate nitrogen loading as follows ("TKN" represents "Total Kjeldahl Nitrogen"):

$$\text{Wet Weight Solids and Sludges: } \frac{\text{lbs of solids} \times \%\text{solids} \times \%\text{ TKN}}{\text{acres land applied} \times 100 \times 100} = \text{lbs TKN/acre}$$

$$\text{Liquid: } \frac{\text{mg/L TKN} \times (\text{millions of gallons}) \times 8.34}{\text{acres land applied}} = \text{lbs TKN/acre}$$

4.3.16 Ponding

The volume of liquid wastes land applied shall be limited to prevent ponding, except for temporary conditions following rainfall events. If ponding occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

4.3.17 Runoff

The volume of liquid wastes land applied shall be limited to prevent runoff. If runoff occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

4.3.18 Soil Incorporation Requirements

- Liquid Sludge Requirements: The Department may require that liquid sludge be incorporated into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for incorporation of liquid sludge, when such incorporation may be necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

- Cake Sludge Requirements: After land application, cake sludge shall be incorporated into the soil. The timing of such incorporation and other related requirements and procedures shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

- Liquid Wastewater Requirements: The Department may require that liquid wastewater be incorporated or injected into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for injection or incorporation of liquid wastewater, when such injection or incorporation is necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

- By-Product Solids Requirements: The Department may limit the volume of by-products solids that are landspread on a specific site when necessary to prevent surface runoff or leaching of contaminants to groundwater and objectionable odors. By-product solids shall, after application, be plowed, disced, or otherwise incorporated into the soil. Requirements and procedures for the incorporation of byproduct solids into the soil shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

4.3.19 Field Stockpiles

The permittee is encouraged to landspread the by-product solids or sludges as they are transported to the fields; but if it becomes necessary to stockpile solids in the fields, the stockpiles shall be spread within 72 hours or as specified in the approved management plan.

4.3.20 By-Product Storage Sites

All sites used for storage of by-product solids shall be located such that surface water or groundwater pollution does not occur. Written Department approval is required prior to storage of more than 150 tons of by-product solids on a site at any one time.

4.3.21 Annual Inspections-Stacking Pads and Leachate Containment

Stacking pads for more than 1200 tons of silage and all leachate containment facilities shall be inspected annually for cracks and shall be repaired as necessary to prevent leakage from the containment system. The inspection reports shall be available for inspection by Department personnel for a period of three years, and shall include at a minimum the following information:

- date and name of person(s) performing the inspection
- description of what the inspection consisted of
- details of what was discovered during the inspection
- recommendations for repair or maintenance
- details or repair completed

4.3.22 Calculation of Water Extractable Phosphorus

The permittee shall use the following formula to calculate and report Water Extractable Phosphorus:
Water Extractable Phosphorus (% of Total P) =
[Water Extractable Phosphorus (mg/kg, dry wt) ÷ Total Phosphorus (mg/kg, dry wt)] x 100

4.3.23 Additional Requirements from ch. NR 214, Wis. Adm. Code

The requirements of s. NR 214.17 (4)(c) [pathogen prohibition for human consumption crop fields], (4)(d)1 [no adverse soil effects], (4)(d)10 [allowable whey spreading rates], and (4)(e)1-3 [by-product solids spreading within agricultural practices and not cause contamination] for landspreading of liquid wastes and by product solids and s. NR 214.18 (4)(b),(d)-(h) [application, nutrient, pH, metals, and PCB limitations] for sludge spreading systems are included by reference in this permit. The permittee shall comply with these requirements.

4.4 Land Application Requirements – Municipal Wastes

4.4.1 Sludge Management Program Standards And Requirements Based Upon Federally Promulgated Regulations

In the event that new federal sludge standards or regulations are promulgated, the permittee shall comply with the new sludge requirements by the dates established in the regulations, if required by federal law, even if the permit has not yet been modified to incorporate the new federal regulations.

4.4.2 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

4.4.3 Sludge Samples

All sludge samples shall be collected at a point and in a manner which will yield sample results which are representative of the sludge being tested, and collected at the time which is appropriate for the specific test.

4.4.4 Land Application Characteristic Report

Each report shall consist of a Characteristic Form 3400-49 and Lab Report unless approval for not submitting the lab reports has been given. Both reports shall be submitted by January 31 following each year of analysis.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All results shall be reported on a dry weight basis.

4.4.5 Land Application Report

Land Application Report Form 3400-55 shall be submitted by January 31 following each year non-exceptional quality sludge is land applied. Non-exceptional quality sludge is defined in s. NR 204.07(4), Wis. Adm. Code.

4.4.6 Other Methods of Disposal or Distribution Report

The permittee shall submit Report Form 3400-52 by January 31, following each year sludge is hauled, landfilled, incinerated, or when exceptional quality sludge is distributed or land applied.

4.4.7 Approval to Land Apply

Bulk non-exceptional quality sludge as defined in s. NR 204.07(4), Wis. Adm. Code, may not be applied to land without a written approval letter or Form 3400-122 from the Department unless the Permittee has obtained permission from the Department to self approve sites in accordance with s. NR 204.06 (6), Wis. Adm. Code. Analysis of sludge characteristics is required prior to land application. Application on frozen or snow covered ground is restricted to the extent specified in s. NR 204.07(3) (l), Wis. Adm. Code.

4.4.8 Soil Analysis Requirements

Each site requested for approval for land application must have the soil tested prior to use. Each approved site used for land application must subsequently be soil tested such that there is at least one valid soil test in the four years prior to land application. All soil sampling and submittal of information to the testing laboratory shall be done in accordance with UW Extension Bulletin A-2100. The testing shall be done by the UW Soils Lab in Madison or Marshfield, WI or at a lab approved by UW. The test results including the crop recommendations shall be submitted to the DNR contact listed for this permit, as they are available. Application rates shall be determined based on the crop nitrogen recommendations and with consideration for other sources of nitrogen applied to the site.

4.4.9 Land Application Site Evaluation

For non-exceptional quality sludge, as defined in s. NR 204.07(4), Wis. Adm. Code, a Land Application Site Request Form 3400-053 shall be submitted to the Department for the proposed land application site. The Department will evaluate the proposed site for acceptability and will either approve or deny use of the proposed site. The permittee may obtain permission to approve their own sites in accordance with s. NR 204.06(6), Wis. Adm. Code.

4.4.10 Reauthorization of Land Application Sites

Prior to the first use during the term of the reissued permit of a previously approved site, the permittee shall notify the Department Basin Wastewater contact person of its intent to apply wastes to the site. The permittee shall provide information on any changes in the site characteristics since the previous approval. The permittee shall not use the site until an updated approval is provided by the Department. In the event the Department does not approve or deny the use of the site within 7 business days after notification of its intent to use the site, the permittee may apply waste to the site under the conditions of its previous approval, pending further action by the Department.

4.4.11 Class B Sludge: Fecal Coliform Limitation

Compliance with the fecal coliform limitation for Class B sludge shall be demonstrated by calculating the geometric mean of at least 7 separate samples. (Note that a Total Solids analysis must be done on each sample). The geometric mean shall be less than 2,000,000 MPN or CFU/g TS. Calculation of the geometric mean can be done using one of the following 2 methods.
Method 1:

Geometric Mean = $(X_1 \times X_2 \times X_3 \ldots \times X_n)^{1/n}$
Where X = Coliform Density value of the sludge sample, and where n = number of samples (at least 7)

Method 2:
Geometric Mean = antilog$[(X_1 + X_2 + X_3 \ldots + X_n) \div n]$
Where X = $\log_{10}$ of Coliform Density value of the sludge sample, and where n = number of samples (at least 7)
Example for Method 2

Sample Number	Coliform Density of Sludge Sample	$\log_{10}$
1	6.0×10^5	5.78
2	4.2×10^6	6.62
3	1.6×10^6	6.20
4	9.0×10^5	5.95
5	4.0×10^5	5.60
6	1.0×10^6	6.00
7	5.1×10^5	5.71

The geometric mean for the seven samples is determined by averaging the $\log_{10}$ values of the coliform density and taking the antilog of that value.
$(5.78 + 6.62 + 6.20 + 5.95 + 5.60 + 6.00 + 5.71) \div 7 = 5.98$
The antilog of $5.98 = 9.5 \times 10^5$

4.4.12 Class B Sludge: Alkaline Stabilization

Add sufficient alkali to the sludge to raise the pH to 12 after 2 hours of contact.

4.4.13 Vector Control: pH Adjustment

The pH of the sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 2 hours and then at 11.5 or higher for an additional 22 hours.

4.4.14 Class B Sludge - Vector Control: Injection

No significant amount of the sewage sludge shall be present on the land surface within one hour after the sludge is injected.

4.4.15 Class B Sludge - Vector Control: Incorporation

Class B sludge shall be incorporated within 6 hours of surface application, or as approved by the Department.

4.4.16 Land Application of Sludge Which Contains Elevated Levels of Radium-226

When contributory water supplies exceed 2 pci per liter of Radium 226, monitoring for Radium 226 in sludge is required. Sludge containing Radium 226 shall be land applied in accordance with the requirements in s. NR 204.07(3)(n), Wis. Adm. Code.

4.4.17 Sludge Hauling

If sludge is hauled to another facility, the permittee is required to submit Form 3400-52 to the Department. Information shall include the quantity of sludge hauled, the name, address, phone number, contact person, and permit number of the receiving facility. Form 3400-52 shall be submitted annually by January 31 following each year sludge is hauled.

5 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Land Application Management Plan -Management Plan Submittal	April 1, 2017	25
Land Application Management Plan -Update to Land Management Plan	January 1, 2021	25
Compliance Maintenance Annual Reports (CMAR)	by June 30, each year	27
General Sludge Management Form 3400-48	prior to any significant sludge management changes	30
Characteristic Form 3400-49 and Lab Report	by January 31 following each year of analysis	31
Land Application Report Form 3400-55	by January 31, each year whether or not non-exceptional quality sludge is land applied	31
Report Form 3400-52	by January 31, each year whether or not sludge is hauled, landfilled, incinerated, or exceptional quality sludge is distributed or land applied	31
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	26

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:
Southeast Region, 2300 N Dr ML King Drive, Milwaukee, WI 53212

ATTACHMENT 1

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES TO BE IDENTIFIED (if Believed Present)

Asbestos	Dimethyl amine	Nitrotoluene
	Dintrobenzene	Parathion
Acetaldehyde	Diquat	Phenolsulfanate
Allyl alcohol	Disulfoton	Phosgene
Allyl chloride	Diuron	Propargite
Amyl acetate	Epichlorohydrin	Propylene oxide
Aniline	Ethion	Pyrethrins
Benzonitrile	Ethylene diamine	Quinoline
Benzyl chloride	Ethylene dibromide	Resorcinol
Butyl acetate	Formaldehyde	Strontium
Butylamine	Furfural	Strychnine
Captan	Guthion	Styrene
Carbaryl	Isoprene	2,4,5-T (2,4,5-Trichloro-phenoxy acetic acid)
Carbofuran	Isopropanolamine	
Carbon disulfide	Dodecylbenzenesulfonate	TDE (Tetrachloro-Diphenylethane)
Chlorpyrifos	Kelthane	
Coumaphos	Kepone	2,4,5-TP [2-(2,4,5-Trichloro-phenoxy) propanoic acid]
Cresol	Malathion	
Crotonaldehyde	Mercaptodimethur	Trichlorofan
Cyclohexane	Methoxychlor	Triethanolamine dodecyl-Benzenesulfonate
2,4-D (2,4-Dichlorophenoxy acetic acid)	Methyl mercaptan	
	Methyl methacrylate	Triethylamine
Diazinon	Methyl parathion	Trimethylamine
Dicamba	Mevinphos	Uranium
Dichlobenil	Mexacarbate	Vanadium
Dichlone	Monoethyl amine	Vinyl acetate
2,2-Dichloropropionic acid	Monomethyl amine	Xylene
Dichlorvos	Naled	Xylenol
Diethyl amine	Napthenic acid	Zirconium

ATTACHMENT 2

PRIMARY INDUSTRIES AND POLLUTANT GROUPS REQUIRING TESTING

INDUSTRIAL CATEGORY	POLLUTANT GROUPS				
	Volatile Organics	Acid Extractable Compounds	Base/Neutral Compounds	Pesticides	Dioxins and Furans
Adhesives and sealants	X	X	X		
Aluminum forming	X	X	X		
Auto and other laundries	X	X	X	X	
Battery manufacturing	X		X		
Coal mining	X	X	X	X	

INDUSTRIAL CATEGORY	POLLUTANT GROUPS				
	Volatile Organics	Acid Extractable Compounds	Base/Neutral Compounds	Pesticides	Dioxins and Furans
Coil coating	X	X	X		
Copper forming	X	X	X		
Electric and electronic compounds	X	X	X	X	
Electroplating	X	X	X		
Explosives manufacturing	X	X	X		
Foundries	X	X	X		
Gum and wood chemicals					
All subparts except D and F	X	X			
Subpart D	X	X	X		
Subpart F	X	X	X		
Inorganic chemicals manufacturing	X	X	X		
Iron and steel manufacturing	X	X	X		
Leather tanning and finishing	X	X	X		X
Mechanical products manufacturing	X	X	X		
Nonferrous metals manufacturing	X	X	X	X	
Ore mining (applies to Subpart B)		X			
Organic chemicals manufacturing	X	X	X	X	X
Paint and ink forming	X	X	X		
Pesticides	X	X	X	X	
Petroleum refining	X				X
Pharmaceutical preparations	X	X	X		
Photographic equipment and supplies	X	X	X		
Plastic and synthetic materials manufacturing	X	X	X	X	
Plastic processing	X				
Porcelain enameling					
Printing and publishing	X	X	X	X	
Pulp, paper and paperboard mills					
Subpart A - Dissolving Kraft	X	X			X
Subpart B - Bleached Papergrade Kraft and Soda	X	X			X
Subpart C - Unbleached Kraft		X		X	X
Subpart D - Dissolving Sulfite	X	X			X
Subpart E - Papergrade Sulfite	X	X	X		X
Subpart F - Semi-chemical		X			X

INDUSTRIAL CATEGORY	POLLUTANT GROUPS				
	Volatile Organics	Acid Extractable Compounds	Base/Neutral Compounds	Pesticides	Dioxins and Furans
Subpart G - Mechanical Pulp	X	X			X
Subpart H - Non-Wood Chemical Pulp	?	?	?	?	X
Subpart I - Secondary Fiber Deink	X	X		X	X
Subpart J - Secondary Fiber Non-Deink	X	X		X	X
Subpart K - Fine and Lightweight Papers from Purchased Pulp					
Nonintegrated Fine		X			X
Nonintegrated Lightweight	X	X		X	X
Subpart L - Tissue, Filter, Non-Woven and Paperboard from Purchased Pulp	X	X		X	X
Rubber processing	X	X	X		
Soap and detergent manufacturing	X	X	X		
Steam electric power plants	X	X			
Textile mills (excluding Subpart C)	X	X	X		
Timber products processing	X	X	X	X	